2006-08 STEERING

Steering - Civic (All Except Hybrid)

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07AAK-SNAA400	1.8 Support Eyelet	1
②	07AAK-SNAA500	1.8 Support Bolt	1
③	07HAG-SF10100	Piston Seal Ring Guide	1
④	07HAG-SF1020A or 07HAG-SF10200	Piston Seal Ring Sizing Tool	1
⑤	07JAF-SH20330	Bushing Base	1
⑥	07MAA-SL00100 or 07916-SA50001	Locknut Wrench, 40 mm	1
⑦	07MAA-SL0020A	Locknut Wrench, 43 mm	1
⑧	07MAC-SL0A202	Ball Joint Remover, 28 mm	1
⑨	07NAD-SR3020A	Cylinder End Seal Remover Attachment	1
⑩	07NAG-SR3090A	Valve Seal Ring Sizing Tool	1
⑪	07RAK-S040111	P/S joint Adapter (Pump)	1
⑫	07RAK-S040122	P/S joint Adapter (Hose)	1
⑬	07YAG-S2X0100	Sleeve Seal Ring Guide	1
⑭	07ZAB-S5A0100	Pulley Holder	1
⑮	07ZAG-S5A0100	Sleeve Seal Ring Sizing Tool, 36 mm	1
⑯	07ZAG-S5A0300	Cylinder End Seal Slider	1
⑰	07406-0010001 or 07406-001000A	P/S Pressure Gauge	1
⑱	07746-0010100	Attachment, 32 x 35 mm	1
⑲	07746-0010300	Attachment, 42 x 47 mm	1
⑳	07749-0010000	Driver	1

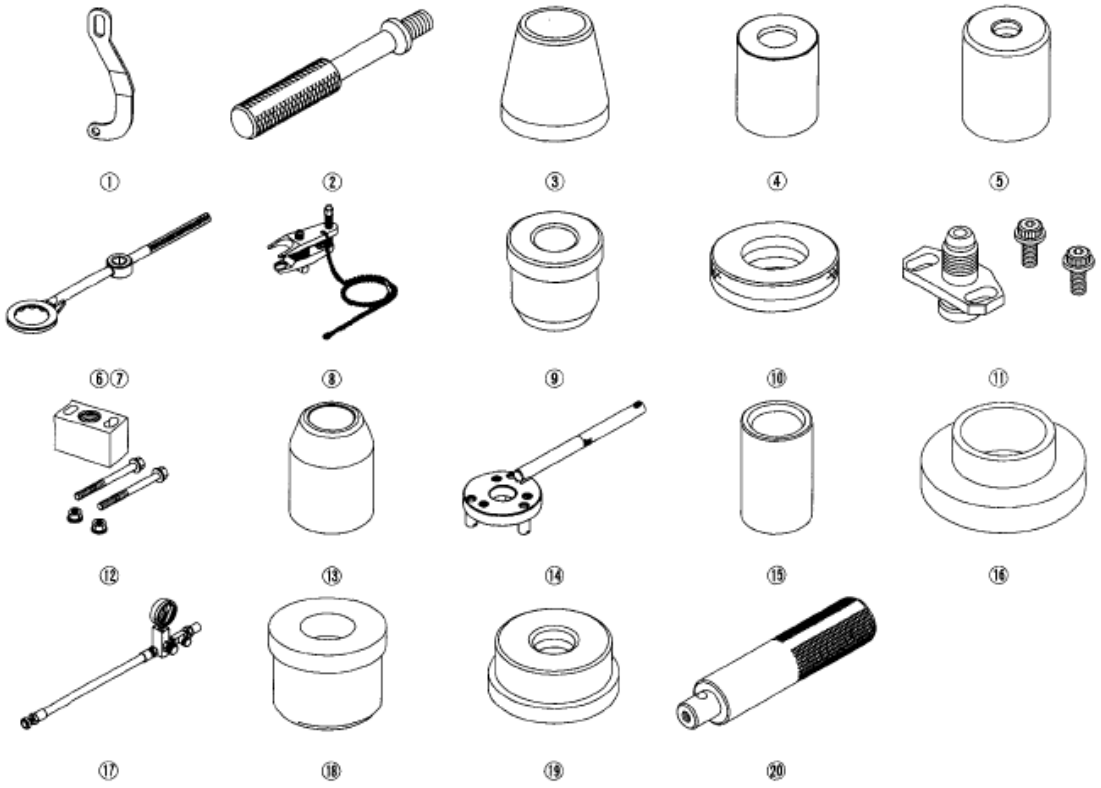

Fig. 1: Identifying Special Tools

COMPONENT LOCATION INDEX

Hydraulic Power Steering Type

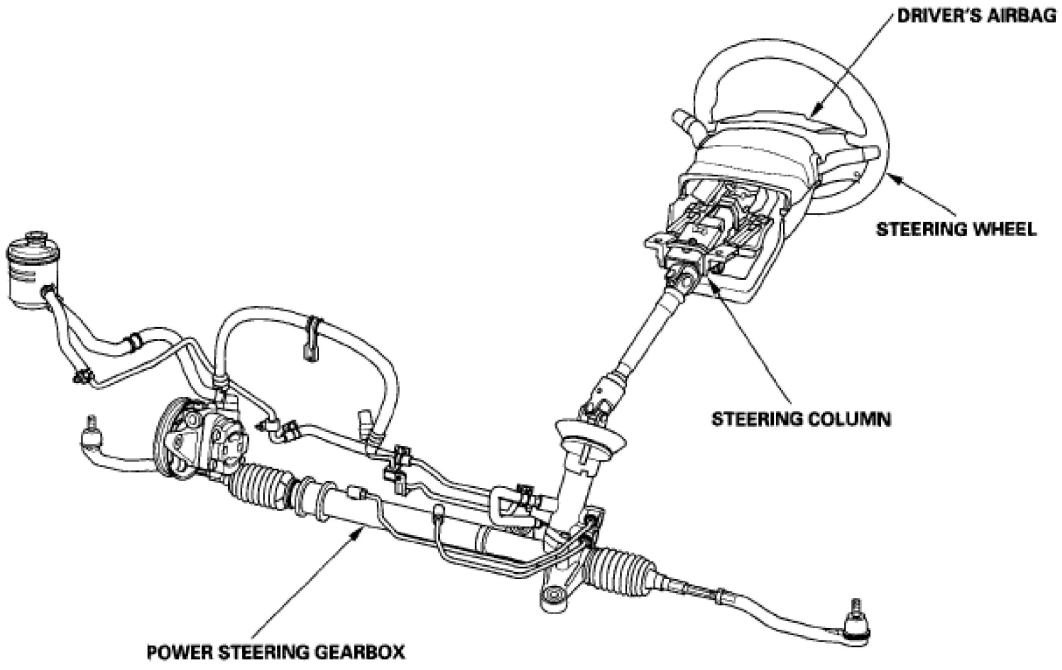

Fig. 2: Identifying Hydraulic Power Steering Type Component Location

EPS Type

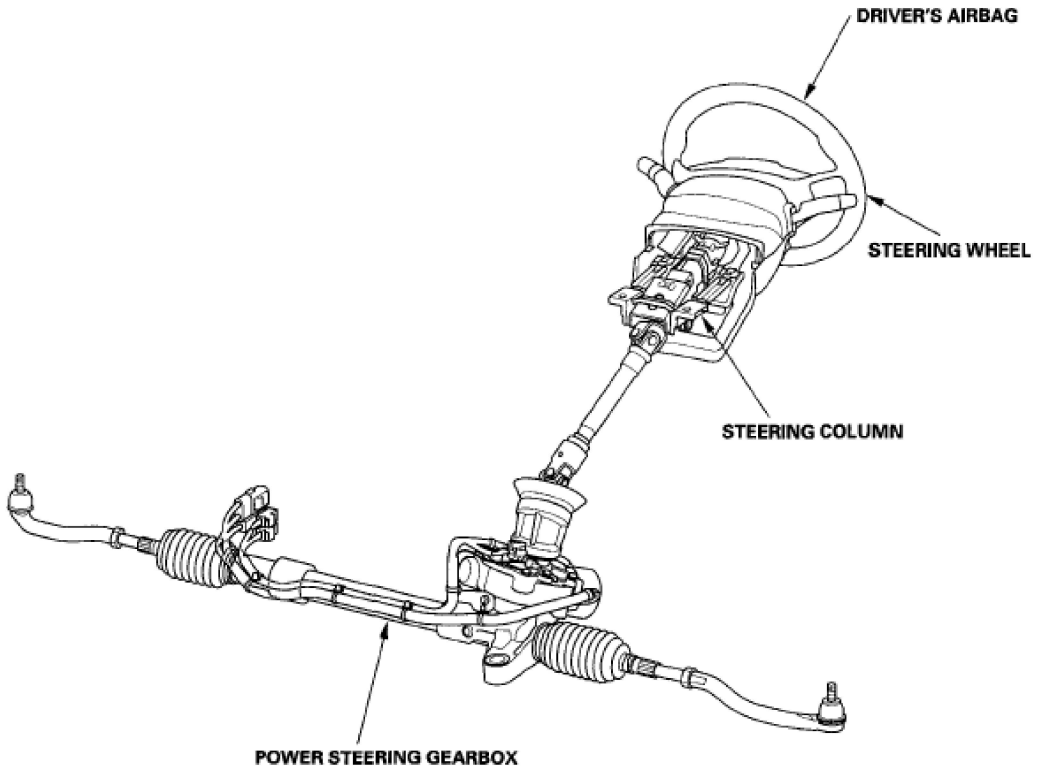

Fig. 3: Identifying Hydraulic Power Steering EPS Type Component Location

STEERING WHEEL ROTATIONAL PLAY CHECK

1. Turn the front wheels to the straight ahead position.
2. Measure how far you can turn the steering wheel left and right without moving the front wheels.
   - If the play is within the limit, the gearbox and linkages are OK.
   - If the play exceeds the limit, adjust the rack guide: power steering type (see **HYDRAULIC POWER STEERING TYPE**), EPS type (see **EPS TYPE**). If the play is still excessive after rack guide adjustment, inspect the steering linkage and gearbox (see **STEERING LINKAGE AND GEARBOX INSPECTION**).

Rotational play: 0-10 mm (0-0.39 in.)

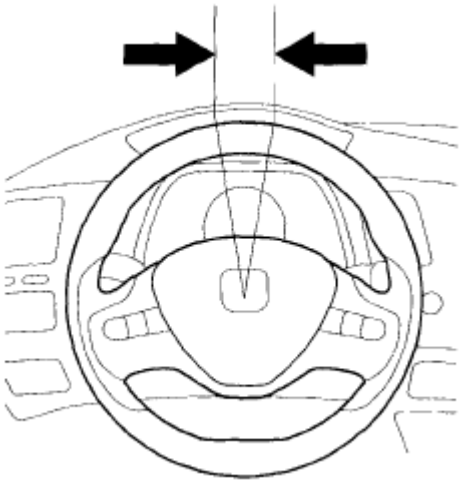

Fig. 4: Identifying Steering Wheel Rotational Play

POWER ASSIST CHECK

NOTE: This test should be done with original equipment tires and wheels at the correct tire pressure.

1. For the power steering type, check the power steering fluid level (see **FLUID REPLACEMENT**).
2. Start the engine, let it idle, and turn the steering wheel from lock-to-lock several times to warm up the component and the fluid (power steering type).
3. Attach a commercially available spring scale to the steering wheel. With the engine idling and the vehicle on a clean, dry floor, pull the scale as shown and read it as soon as the tires begin to turn.
   - If the scale reads no more than the specification, the steering gearbox and pump are OK.
   - For the power steering type, if the scale reads more than specifications, troubleshoot the steering system (see **SYMPTOM TROUBLESHOOTING**)
   - For the EPS type, if the scale reads more than specifications, check for steering linkage (see **STEERING LINKAGE AND GEARBOX INSPECTION**), and check the rack guide adjustment (see **EPS TYPE**).

Initial turning load: 34 N (3.5 kgf, 7.7 lbf)

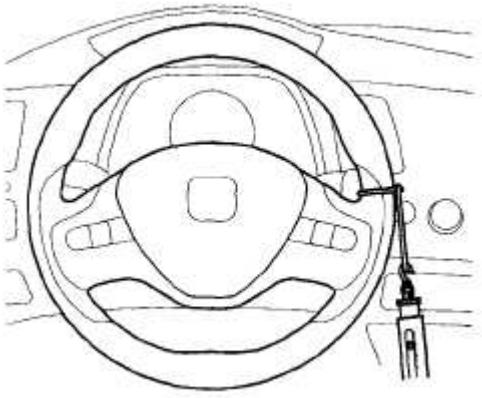

Fig. 5: Identifying Power Steering Wheel Initial Turning Load

STEERING LINKAGE AND GEARBOX INSPECTION

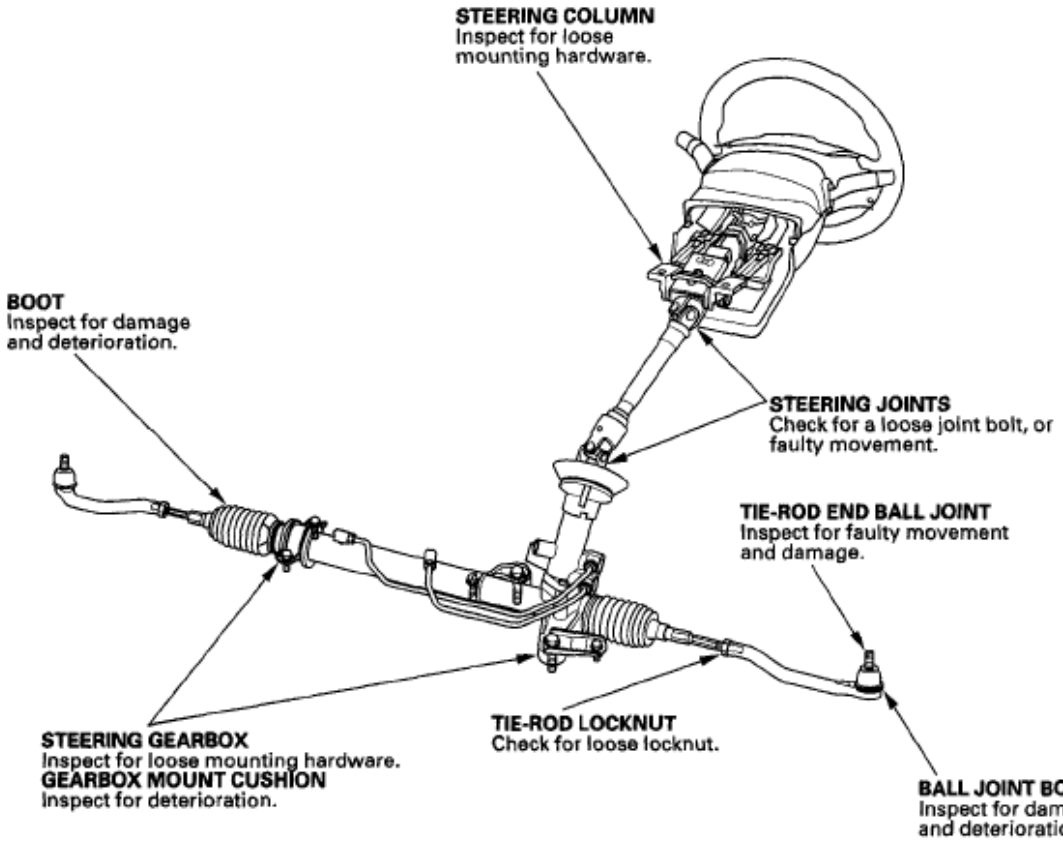

Fig. 6: Identifying Steering Linkage And Gearbox Components Location

STEERING WHEEL REMOVAL

SRS components are located in this area. Review the SRS component locations (see

COMPONENT LOCATION INDEX) and the precautions and procedures (see **PRECAUTIONS AND PROCEDURES**) in the SRS before doing repairs or service.

1. Make sure you have the anti-theft code for the audio or navigation system, then write down the audio presets.
2. Make sure the ignition switch at LOCK (0), then disconnect the negative cable from the battery.
3. Align the front wheels straight ahead, then remove the driver's airbag from the steering wheel (see **DRIVER'S AIRBAG REPLACEMENT**).
4. Disconnect the cable reel subharness connector (A).

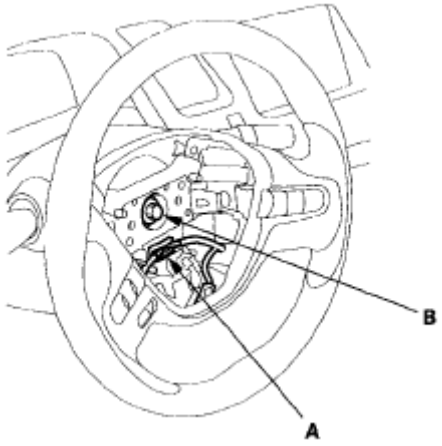

Fig. 7: Identifying Cable Reel Subharness Connector And Steering Wheel Bolt

5. Loosen the steering wheel bolt (B).
6. Install a commercially available steering wheel puller (A) on the steering wheel (B). Free the steering wheel from the steering column shaft by turning the pressure bolt (C) of the puller.

   Note these items when removing the steering wheel:

   - Do not tap on the steering wheel or the steering column shaft when removing the steering wheel.
   - If you thread the puller bolts (D) into the wheel hub more than five

threads, the bolts will hit the cable reel and damage it. To prevent this, install a pair of jam nuts five threads up on each puller bolt.

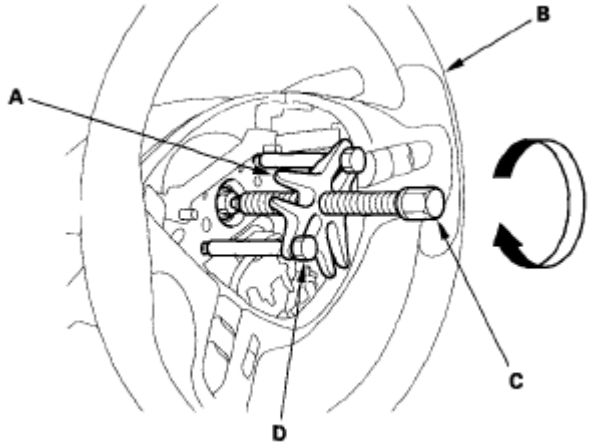

Fig. 8: Identifying Steering Wheel Puller On Steering Wheel & Bolts

7. Remove the steering wheel puller, then remove the steering wheel bolt and steering wheel from the steering column.

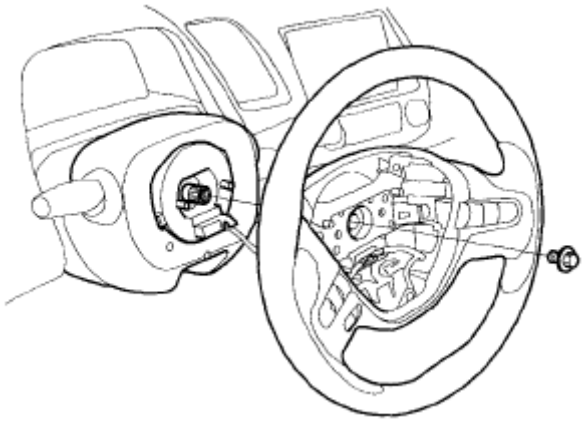

Fig. 9: Identifying Steering Wheel And Bolt

STEERING WHEEL DISASSEMBLY/REASSEMBLY

Except Si model

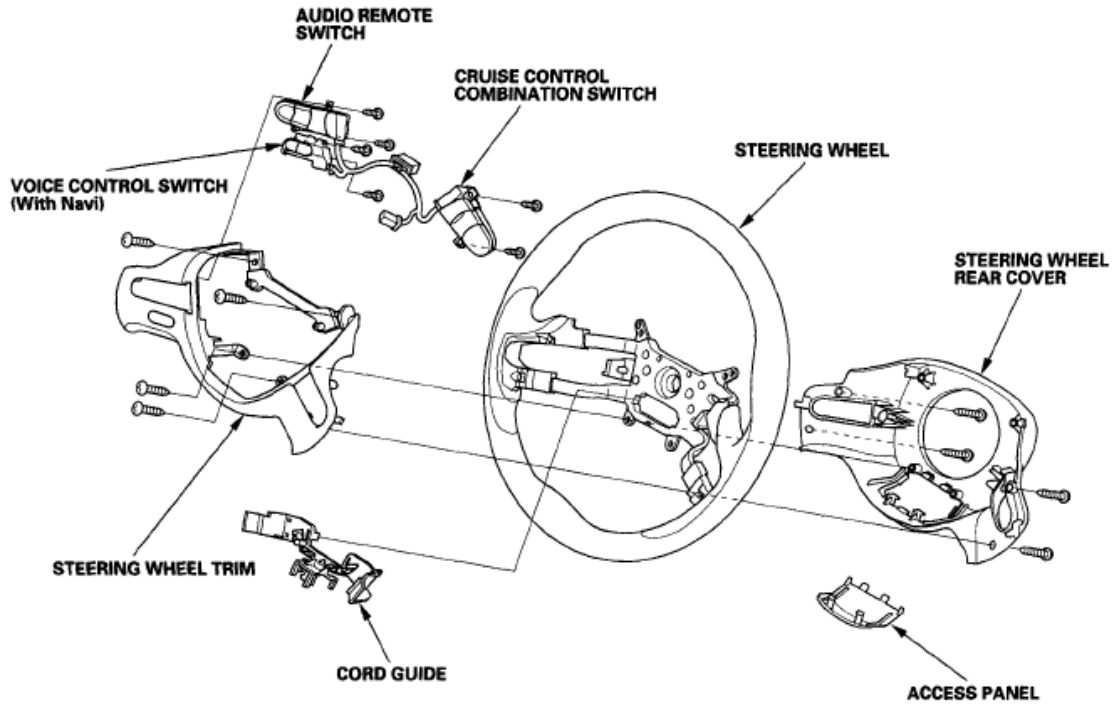

Fig. 10: Exploded View Of Steering Wheel - Except Si Model

Si model

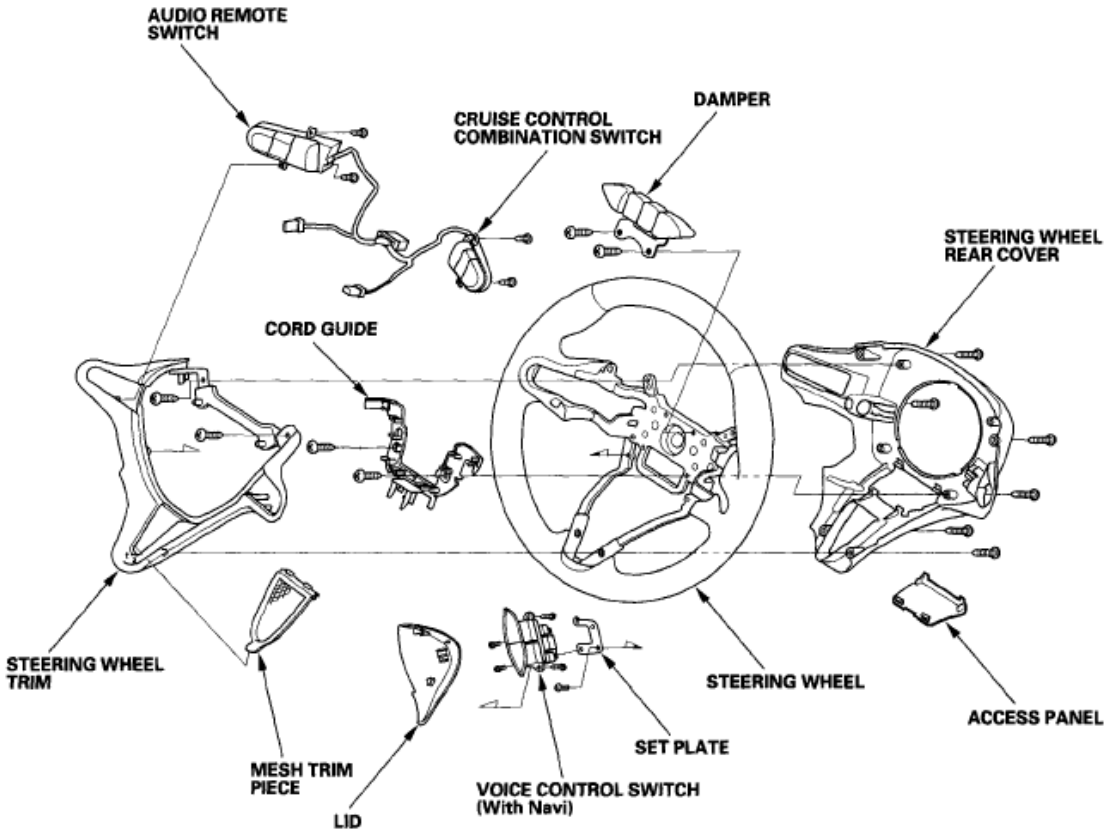

Fig. 11: Exploded View Of Steering Wheel - Si Model

STEERING WHEEL INSTALLATION

1. Before installing the steering wheel, make sure the front wheels are aligned straight ahead, then center the cable reel (A). Do this by first rotating the cable reel clockwise until it stops. Then rotate it counterclockwise about three full turns. The arrow mark (B) on the cable reel label should point straight up.

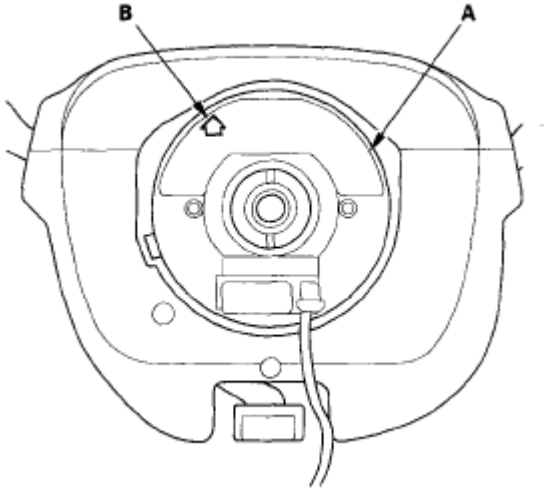

Fig. 12: Identifying Arrow Mark On Cable Reel Label

2. Position the two tabs (A) of the turn signal cancelling sleeve (B) as shown. Install the steering wheel on to the steering column shaft, making sure the steering wheel hub (C) engages the pins (D) of the cable reel and tabs of the turn signal canceling sleeve. Do not tap on the steering wheel or steering column shaft when installing the steering wheel.

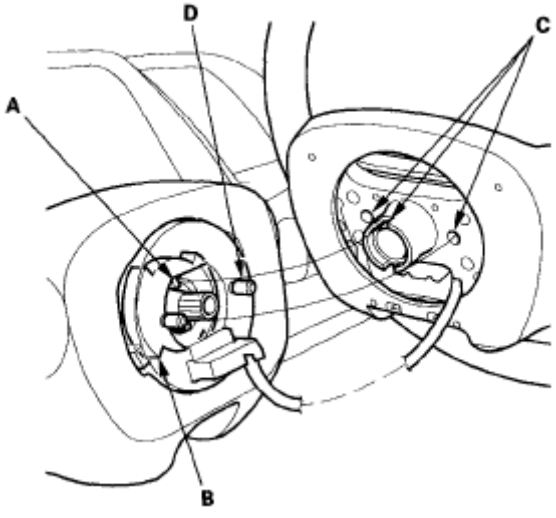

Fig. 13: Identifying Steering Wheel On Steering Column Shaft

3. Install the steering wheel bolt (A), and tighten it to the specified torque. Connect the cable reel subharness connector (B). Make sure the wire harness is routed and fastened properly.

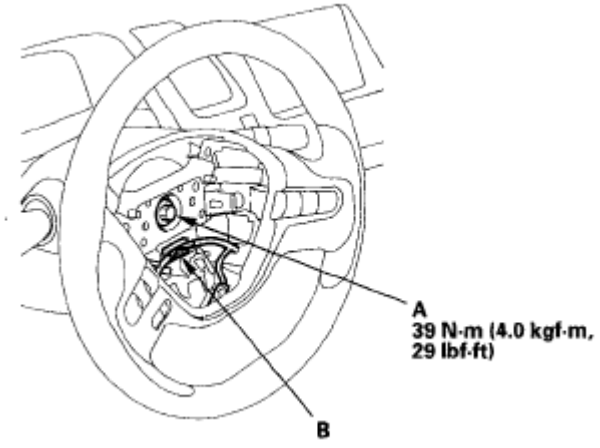

Fig. 14: Identifying Steering Wheel Bolt - Specified Torque

4. Install the driver's airbag, and confirm that the system is operating properly (see **DRIVER'S AIRBAG REPLACEMENT**).
5. Reconnect the negative cable to the battery and do these items:
   - Turn the ignition switch ON (II); the SRS indicator should come on for about 6 seconds and then go off.
   - Enter the anti-theft code for the audio or navigation system, then enter the audio presets.
   - Set the clock.
   - Make sure the horn and turn signal switch work properly.
   - Make sure the steering wheel switches work properly.
   - Make sure the steering wheel is centered.
6. After installation, do these checks.
   - Check the steering wheel spoke angle. If the steering spoke angles to the right and left are not equal (steering wheel is not centered), correct the engagement of the wheel/column shaft serrations.
   - Set the steering column to the center tilt position, and to the center telescopic position, then do the front toe inspection (see **FRONT TOE INSPECTION/ADJUSTMENT**).

COLUMN COVER REMOVAL AND INSTALLATION

NOTE:
- **Take care not to scratch or damage the column covers.**

- **Do not pry the cover surface with any tools.**

1. Release the lock lever (A), and adjust the steering column to full tilt down position and to the full telescopic pull position.

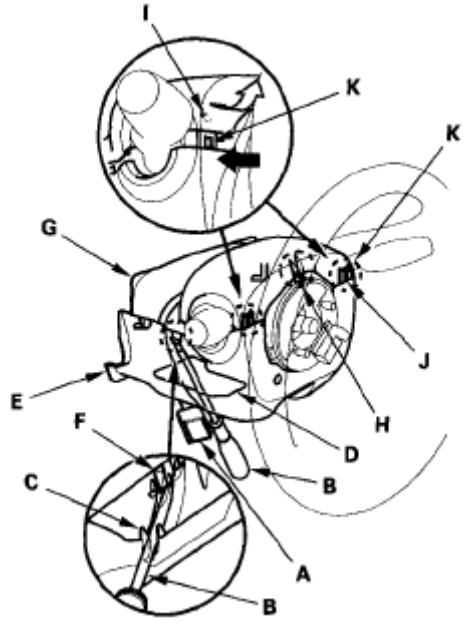

Fig. 15: Identifying Column Cover Remove/Install Components

2. Insert a suitable sized screwdriver or equivalent tool (B) along the guide rib (C) into the lever hole (D) in the lower column cover (E).
3. Release the hook (F) locating on the left side of the upper column cover (G). A right side hook (H) of the upper column cover can't be released from the inside.
4. Turn the steering wheel to left, and release the left pawl (I) of the upper column cover while pushing the lower column cover from the front side.
5. Turn the steering wheel to right, and release the right pawl (J) of the upper column cover is in the same as the step 4.
6. Remove the cover by lightly pulling it up by releasing the right side hook (H) of the upper column cover.

NOTE: Carefully release the pawls, note the hooks (K) may break when upper column cover is pulled up too hard.

7. Remove the three screws, then remove the lower column cover (A).

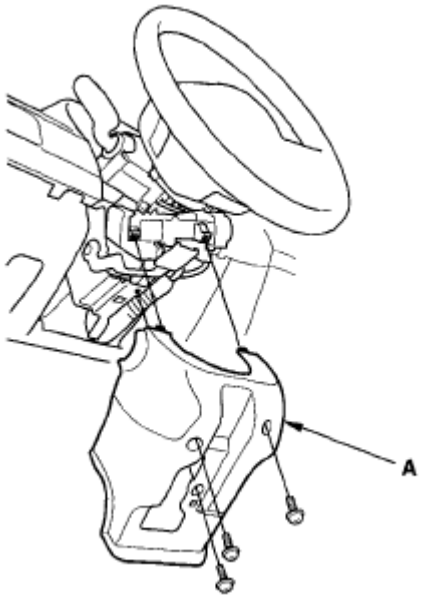

Fig. 16: Identifying Lower Column Cover And Screws

8. Install the upper and lower column cover in the reverse order of removal, and push the hooks into place securely.

STEERING COLUMN REMOVAL AND INSTALLATION

SRS components are located in this area. Review the SRS component locations (see **COMPONENT LOCATION INDEX**) and the precautions and procedures (see **PRECAUTIONS AND PROCEDURES**) in the SRS before doing repairs or service.

REMOVAL

NOTE: Be careful not to pull the bracket (A) on the front side of steering column out of its normal position. If the bracket accidentally comes out, replace the steering column as an assembly.

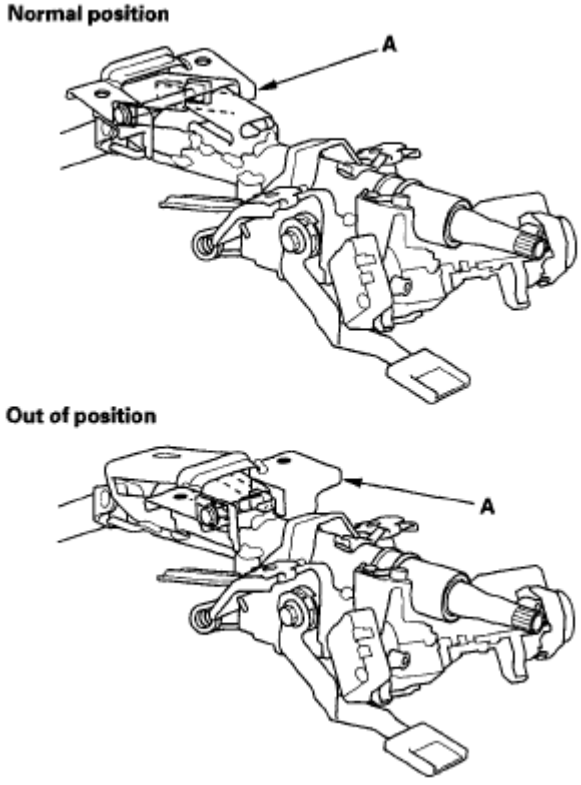

Fig. 17: Identifying Steering Column Bracket Removal Position

1. Make sure you have the anti-theft code for the audio or navigation system, then write down the audio presets.
2. Make sure the ignition switch is OFF, then disconnect the negative cable from the battery.
3. Remove the driver's airbag assembly and the steering wheel (see **STEERING WHEEL REMOVAL**).
4. Remove the driver's dashboard undercover (see **DRIVER's DASHBOARD UNDERCOVER REMOVAL/INSTALLATION**).
5. Remove the column covers (see **COLUMN COVER REMOVAL AND INSTALLATION**).
6. Remove the steering joint cover (A).

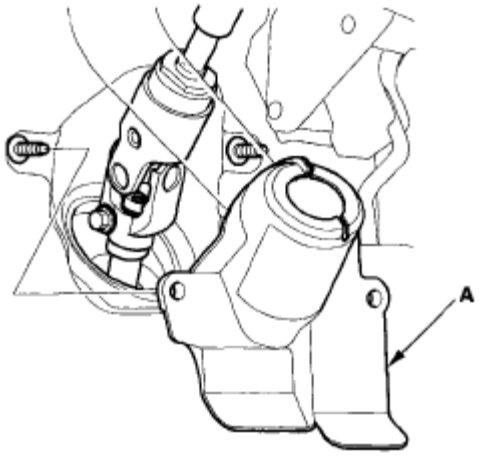

Fig. 18: Identifying Steering Joint Cover

7. Release the lock lever, and adjust the steering column to full tilt up position, and to the full telescopic in position.
8. Tighten the lock lever.
9. Hold the lower slide shaft (A) on the column with a piece of wire (B) between the joint yoke (C) of the lower slide shaft and joint yoke (D) of the upper shaft to prevent the slider shaft from pulling out.

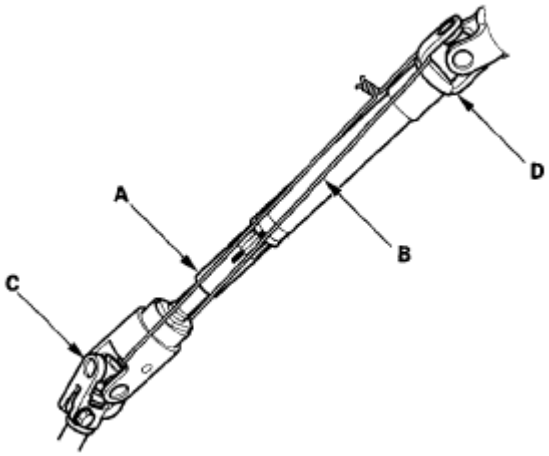

Fig. 19: Identifying Lower Slide Shaft With Wire Between Joint Yokes

10. Release the lock lever, and adjust the steering column to the full telescopic out position, then tighten the lock lever.

NOTE: Do not release lock lever when removing the steering

column from the frame.

11. Disconnect the wire harness connectors from the combination switch assembly and cable reel (A).

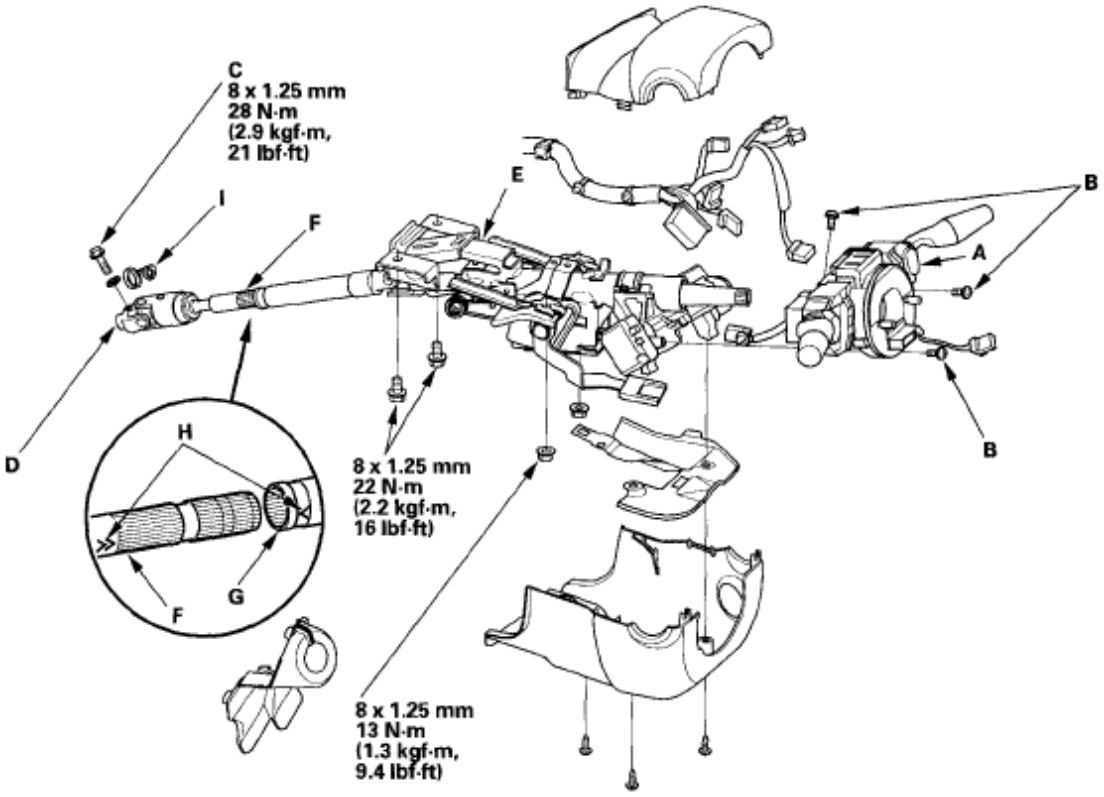

Fig. 20: Identifying Steering Column Components With Torque Specifications

12. Remove the combination switch assembly from the steering column shaft by removing the three screws (B).
13. Disconnect the connectors from the ignition switch, and release the wire harness clips from the steering column.
14. Remove the steering joint bolt (C), then disconnect the steering joint (D) from the pinion shaft.
15. Remove the steering column (E) by removing the attaching nuts and bolts. If the lower slide shaft (F) is removed, slip it into the upper shaft (G) by aligning the paint or stamped marks (H).
16. Remove the center guide (I) (if equipped), and discard it. The center guide is

for factory assembly only.

INSTALLATION

1. Install the steering column in the reverse order of removal, and note these items:
   - Make sure the wires are not caught or pinched by any parts.
   - Take care not to let the sliding capsules fall out of position during column installation.
2. Center the steering rack within its stroke in steering joint connection.
3. With the rack in the straight ahead driving position, cut the wire (A) and slip the lower end of the steering joint onto the pinion shaft (B) in the range shown.

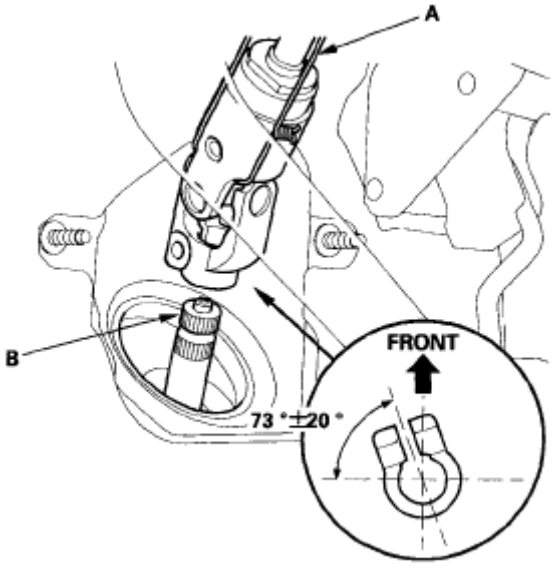

Fig. 21: Cutting Wire & Slipping Lower End Of Steering Joint Into Pinion Shaft

4. Align the bolt hole (A) on the steering joint with the groove (B) around the pinion shaft, and loosely install the joint bolt (C). Be sure that the joint bolt is securely in the groove in the pinion shaft. Pull on the steering joint to make sure that the steering joint is fully seated. Tighten the steering joint bolt to the specified torque.

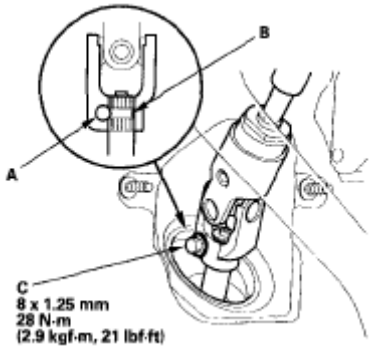

Fig. 22: Identifying Bolt Hole, Steering Joint With Groove & Steering Joint Bolt With Torque Specifications

5. Install the steering joint cover (A).

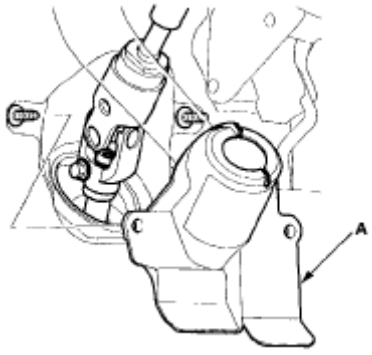

Fig. 23: Identifying Steering Joint Cover

6. Install the steering wheel (see **STEERING WHEEL INSTALLATION**).
7. Install the column covers.
8. Install the driver's dashboard undercover.
9. Reconnect the negative cable to the battery and do these items:
   - Turn the ignition switch ON (II); the SRS indicator should come on for about 6 seconds and then go off.
   - Enter the anti-theft code for the audio or navigation system, then enter the audio presets.
   - Set the clock.
   - Make sure the horn and turn signal switch work properly.
   - Make sure the steering wheel switches work properly.

- Make sure the steering wheel is centered.

10. After installation, do these checks.
    - Check the steering wheel spoke angle. If the steering spoke angles to the right and left are not equal (steering wheel is not centered), correct the engagement of the wheel/column shaft serrations.
    - Set the steering column to the center tilt position, and to the center telescopic position, then do the front toe inspection (see **FRONT TOE INSPECTION/ADJUSTMENT**).

STEERING COLUMN/TILT/TELESCOPIC INSPECTION

- Check the steering column ball bearing (A) and the steering joint bearings (B) for play and proper movement. If any bearing is noisy or has excessive play, replace the steering column as an assembly.
- Check the lower slide shaft (C) for smooth movement in and out. If the lower slide shaft is removed, slip it into the upper shaft by aligning the paint or stamped marks (D). If it sticks or binds, replace the steering column as an assembly.
- Check the sliding capsules (E) for distortion or breakage. If there is distortion or breakage, replace the steering column as an assembly.
- Check the tilt mechanism and telescopic mechanism for movement and damage.
- Check the absorbing plates (F) for distortion or breakage. If there is distortion or breakage, replace the steering column as an assembly.

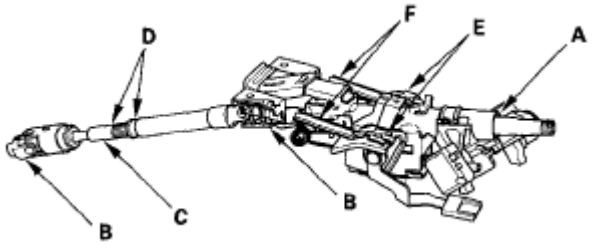

Fig. 24: Identifying Steering Column/Tilt/Telescopic Components

STEERING LOCK REPLACEMENT

1. Remove the steering column (see **STEERING COLUMN REMOVAL AND INSTALLATION**).
2. Center-punch each of the two shear bolts, and drill the heads of the bolts off with a 5 mm (3/16 in.) drill bit. Be careful not to damage the switch body when removing the shear bolts.

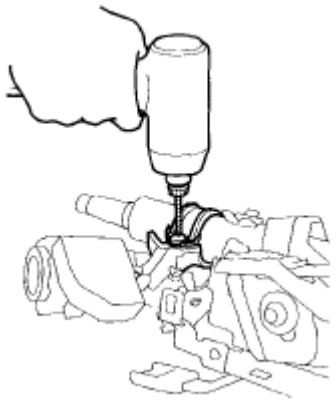

Fig. 25: Removing Shear Bolts

3. Remove the shear bolts from the switch body.
4. Install the switch body without the key inserted.
5. Loosely tighten the new shear bolts.
6. Insert the ignition key, and make sure the steering wheel lock works properly and that the ignition key turns freely.
7. Tighten the shear bolts (A) until the hex heads (B) twist off.

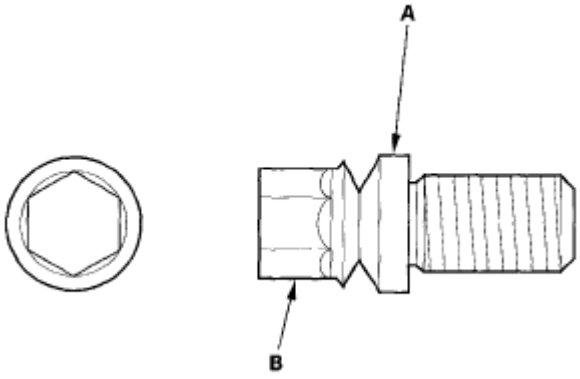

Fig. 26: Identifying Shear Bolts And Hex Heads

8. Rewrite the new immobilizer control unit-receiver (see **COMPONENT LOCATION INDEX**), and make sure the immobilizer system works properly.

RACK GUIDE ADJUSTMENT

Special Tools Required

- Locknut wrench, 40 mm 07MAA-SL00100 or 07916-SA50001
- Locknut wrench, 43 mm 07MAA-SL0020A

HYDRAULIC POWER STEERING TYPE

1. Set the wheels in the straight ahead position.
2. Loosen the rack guide screw locknut (A) with the locknut wrench, then remove the rack guide screw (B).

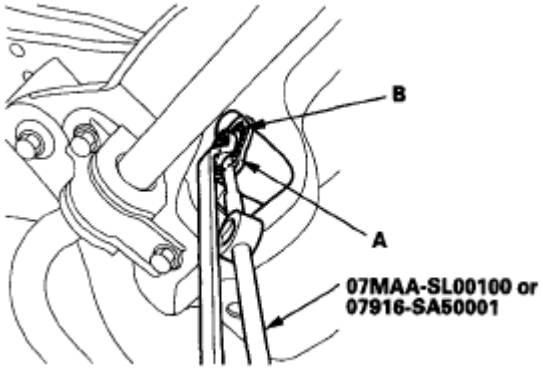

Fig. 27: Identifying Rack Guide Screw Locknut, Locknut Wrench & Rack Guide Screw

3. Remove the old sealant from the rack guide screw (A), and apply new sealant (Three Bond 1215 or Loctite 5699) to the middle of the threads (B). Loosely install the rack guide screw on the steering gearbox.

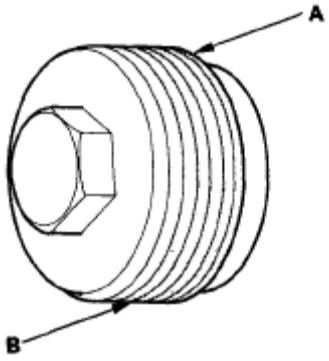

Fig. 28: Identifying Rack Guide Screw

4. Tighten the rack guide screw (A) to 25 N.m (2.5 kgf.m, 18 lbf.ft), then loosen it.

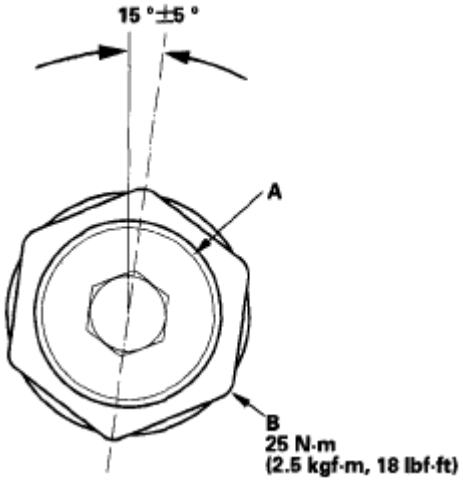

Fig. 29: Identifying Rack Guide Screw Torque Specifications

5. Retighten the rack guide screw to 5.9 N.m (0.6 kgf.m, 4.0 lbf.ft), then back it off to the specified angle.

   Specified return angle:

   '06 model: 15° ± 5°

   '07-08 model: 10° ± 5°

6. Hold the rack guide screw stationary with a wrench, and install the locknut (B) by hand until it's fully seated.

7. Install the locknut wrench on the locknut, and hold the rack guide screw stationary with a wrench. Tighten the locknut to the specified torque.
8. Check for unusual steering effort through the complete turning travel.
9. Check the steering wheel rotational play (see **STEERING WHEEL ROTATIONAL PLAY CHECK**), and the power assist (see **STEERING WHEEL ROTATIONAL PLAY CHECK**).

EPS TYPE

1. Set the wheels in the straight ahead position.
2. Loosen the rack guide screw locknut (A) with the locknut wrench, then remove the rack guide screw (B).

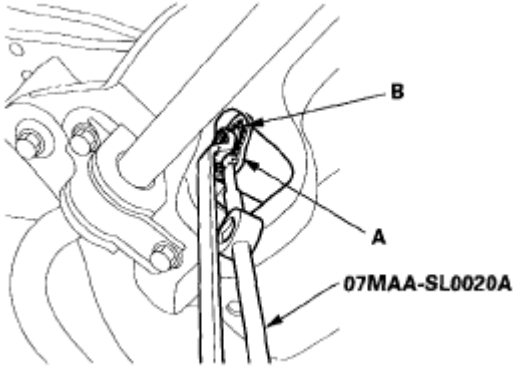

Fig. 30: Identifying Rack Guide Screw Locknut, Locknut Wrench & Rack Guide Screw

3. Remove the old sealant from the rack guide screw (A), and apply new sealant (Three Bond 1215 or Loctite 5699) to the middle of the threads (B). Loosely install the rack guide screw on the steering gearbox.

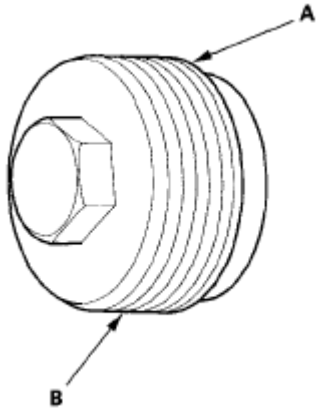

Fig. 31: Identifying Rack Guide Screw

4. Tighten the rack guide screw (A) to 25 N.m (2.5 kgf.m, 18 lbf.ft), then loosen it.

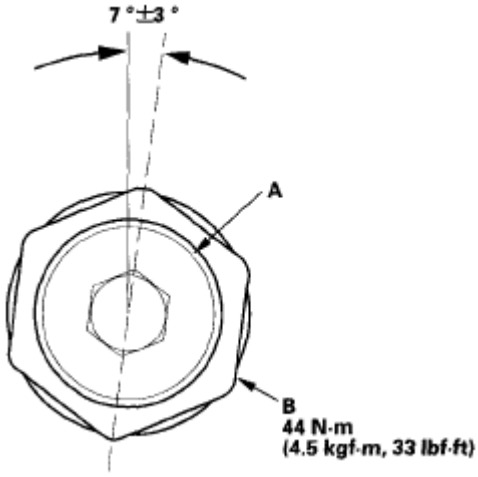

Fig. 32: Identifying Rack Guide Screw Torque Specifications

5. Retighten the rack guide screw to 3.9 N.m (0.4 kgf.m, 2.9 lbf.ft), then back it off to the specified angle.

   Specified return angle: 7° ± 3°

6. Hold the rack guide screw stationary with a wrench, and install the locknut (B) by hand until it's fully seated.
7. Install the locknut wrench on the locknut, and hold the rack guide screw stationary with a wrench. Tighten the locknut to the specified torque.

8. Check for unusual steering effort through the complete turning travel.
9. Check the steering wheel rotational play (see **STEERING WHEEL ROTATIONAL PLAY CHECK**), and the power assist (see **STEERING WHEEL ROTATIONAL PLAY CHECK**).

TIE-ROD BALL JOINT BOOT REPLACEMENT

Special Tools Required

Bushing Base 07JAF-SH20330

1. Remove the boot from the tie-rod end, and wipe the old grease off the ball pin.
2. Pack the lower area of the ball pin (A) with fresh multipurpose grease.

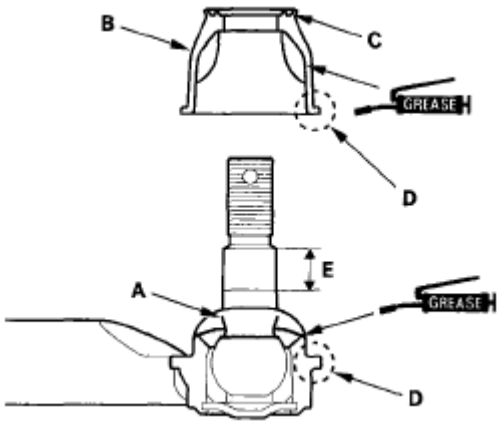

Fig. 33: Identifying Areas For Applying Multipurpose Grease

3. Pack the interior of the new boot (B) and lip (C) with fresh multipurpose grease.

   Note these items when installing new grease:

   - Keep grease off the boot mounting area (D) and the tapered section (E) of the ball pin.
   - Do not allow dust, dirt, or other foreign materials to enter the boot.
4. Install the new boot (A) using the bushing base. The boot must not have a gap at the boot installation sections (B). After installing the boot, check the ball pin tapered section for grease contamination, and wipe it if necessary.

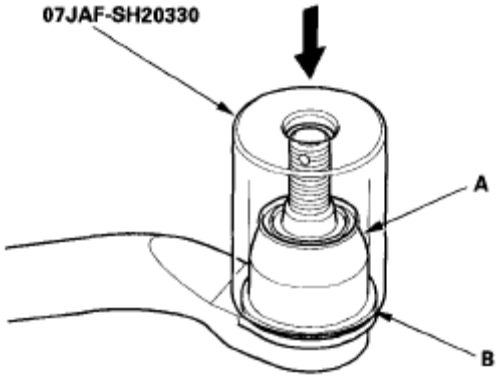

Fig. 34: Installing New Boot